Diva Client Adapters

Technical Information

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Contents

About this Guide **4**

Technical Specifications **5**

Features **7**

Hardware Resources **9**

International Regulatory Information **10**

Regulatory Information for the USA 10

Regulatory Information for Canada 12

Regulatory Information for Europe 14

Regulatory information for Australia 17

CHAPTER 1

About this Guide

This manual contains important information about the various Diva Client adapters and supplements the information contained in the printed Diva Client QuickStart Guide and the Reference Guide on the Diva Client Software Suite CD-ROM included with your Diva Client adapter.

This reference guide is organized as follows:

Section	Contents
Technical Specifications	Lists the technical (hardware) specifications for each Diva Client adapter.
Features	Lists the supported features for each Diva Client adapter.
Hardware Resources	Discusses supported IRQs and I/O port base addresses.
International Regulatory Information	Contains regulatory information. You should read the regulatory information for your country before you install your Diva Client adapter.

CHAPTER 2

Technical Specifications

The tables below list the technical (hardware) specifications for each Diva Client adapter:

	Diva 2.0x	Diva Pro 2.0, Diva Pro 3.0 Diva Pro PC Card Diva Pro 3.0 PC Card
External interface	Female RJ-45 (ISDN BRI)	Female RJ-45 (ISDN BRI)
Bus type	2.0x: PCI	Pro 2.0: PCI Pro 3.0: PCI Pro PC Card: PCMCIA TYPE II Pro 3.0 PC Card: PCMCIA TYPE II
DSP	none	Pro 2.0, Pro PC Card: 33 MIPS Pro 3.0: 65 MIPS Pro 3.0 PC Card: 50 MIPS
Dimensions (mm)	2.0x: 120 x 56	Pro 2.0: 127 x 107 Pro 3.0: 132 x 65 Pro PC Card: 85 x 54 Pro 3.0 PC Card: 85 x 54
Memory	none	80 KB
Data transmission rate	2 x 64 Kbps B-Channel, 1 x 16 Kbps D-Channel	2 x 64 Kbps B-Channel, 1 x 16 Kbps D-Channel
Plug&Play Standard	yes	yes
B- and D-channel trace	yes	yes
Powerdown-Management	yes	yes
Power requirements (5V)	2.0x: 80 mA	Pro 2.0: 210 mA Pro 3.0: 100 mA Pro PC Card: 80 mA Pro 3.0 PC Card: 45mA

	Diva USB
External interface	Female RJ-45 (ISDN BRI) USB-connector Series B
Bus type	USB
DSP	none
Dimensions (mm)	112 x 24 x 61 (without stand)
Memory	none
Data transmission rate	2 x 64 Kbps B-Channel, 1 x 16 Kbps D-Channel
Plug&Play Standard	yes (USB rev. 1.1, hot plug&play)
B- and D-channel trace	yes
Powerdown-Management	yes
Power requirements (5V)	bus-powered device: 45 mA typical, 90 mA max., 430 µA in suspend mode

CHAPTER 3

Features

The table below lists the supported features for each Diva Client adapter:

Feature	Diva USB Diva 2.0x	Diva Pro 2.0 Diva Pro 3.0 Diva Pro PC Card Diva Pro 3.0 PC Card
Transparent HDLC	•	•
Transparent (Voice)	•	•
X.75	•	•
T.70/T.90 (T-Online)	•	•
V.110 (GSM)		•
V.120	•	•
V.34+, V.90 analog modem		•
V.42, V.42bis	•	•
X.75/V.42bis	•	•
Change of B-channel protocol during a call	•	•
X.25, X.31, ISO 8208 in the B-channel	•	•
Fax Group 4 (incl. T.90/ISO8208 and module mode detection)	•	•
T.30 Fax Group 3 (analog), Class 1 and 2	•	•
Fax with Error Correction Mode (ECM) Fax with MR (D2 coding) Fax with MMR (T.6 coding)	•	•
Fax 14.4 kbps Softfax	•	
Fax 33.6 kbps (V.34) Super G3 Fax		•
Fax tone detection	•	•
Reversal of fax direction	•	•
Fax polling / fax on demand	•	•
DTMF tone detection and transmission	•	•

Feature	Diva USB Diva 2.0x	Diva Pro 2.0 Diva Pro 3.0 Diva Pro PC Card Diva Pro 3.0 PC Card
Supplementary Services:		
MSN (multiple subscriber number)	•	•
DDI (direct dialing-in)	•	•
SUB (sub-addressing)	•	•
CLIP (calling line identification presentation)	•	•
CLIR (calling line identification restriction)	•	•
COLP (connected line identification presentation)	•	•
COLR (connected line identification restriction)	•	•
KEY (keypad protocol)	•	•
TP (terminal portability)	•	•
Call forwarding unconditional	•	•
Call forwarding busy	•	•
Call forwarding no reply	•	•
Call deflection	•	•
CW (call waiting)	•	•
HOLD (hold and retrieve a call)	•	•
ECT (explicit call transfer)	•	•
AoC (advice of charge)	•	•
Three-party conference	•	•
Large conference	•	•
User-to-user signaling	•	•
Others:		
Transparent D-channel	•	•
X.25/D-channel including	•	•

Note: Since supported features also depend on the software you are using, you should also refer to the online Reference Guides for your software.

CHAPTER 4

Hardware Resources

This chapter discusses supported hardware resources for the various Diva Client adapters.

Note: You need to change the default settings only if another device in your PC uses the same settings.

Supported interrupts (IRQs)

Diva PCI-compliant adapters support all IRQs available from the computer's BIOS.

For Diva PCMCIA (PC Card) adapters, the following IRQs are supported:

Diva PCMCIA adapter	Supported Interrupts
Diva Pro PC cards	3, 4, 5, 7, 9, 10, 11, 12, 14, 15

Supported I/O port base addresses

You can use any one of the following I/0 port base addresses for all Diva Client adapters, except for the PC Card (PCMCIA) adapters:

200H	240H	280H	2C0H	300H	340H	380H	3C0H
220H	260H	2A0H	2E0H	320H	360H	3A0H	3E0H

CHAPTER 5

International Regulatory Information

Note: The Diva USB adapter and the Diva Pro PC card are certified only for CE.

Regulatory Information for the USA

WARNING: Changes or modifications to this unit not expressly approved by Eicon Networks Corporation could void the user's authority to operate the equipment.

Declaration of Conformity

We:
Eicon Networks
Parkway Centre II
2805 N. Dallas Parkway
Suite 200
Plano, TX 75093
(972) 473-4500
Fax: (972) 473-4510

Declare under our sole legal responsibility that the products listed below to which this declaration relates, are in conformity with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Part 68 Notice

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA.

On the bottom of this equipment is a label that contains, among other information, a FCC part 68 registration number or a product identifier in the format US: AAAEQ##TXXXX. If requested, this information must be provided to the telephone company.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US: AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g. 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please contact us for repair and warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you to remove the equipment from the network until the problem is resolved.

This unit contains no user-serviceable parts.

Connection to party lines is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

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	Facility Interface code	Digital Reg. code	Service Order code	USOC Jack Type
S/T	021S5	XD	6.0N	N/A
S/T with Fax option	021S5	XD	6.0P	N/A

Fax

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including FAX machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual.

Suppliers Declaration of Conformity

Eicon Network's declaration of conformity can be viewed at:

http://www.eicon.com/worldwide/about/declarations/default.htm

Regulatory Information for Canada

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. Industry Canada does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Warning: For your safety, follow these steps before you remove the cover from your PC:
1. Turn off the power to your PC and all peripheral devices.
2. Disconnect the power cable.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

For their own protection, users should ensure that any electrical ground connections of the power utility, telephone lines and internal metallic water pipe system are connected together. This precaution is particularly important in rural areas.

Warning: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Note: The Diva Pro 3.0 PC Card is currently not certified in Canada. To receive detailed approval information, send a request specifying the product name and the country to the following E-mail address: certification@eicon.com

Regulatory Information for Europe

CE

EU Declaration of Conformity

Eicon Networks Corporation declares that this equipment is in compliance with the Radio and Telecommunication Terminal Equipment directive 1999/5/EC with requirements covering the Electromagnetic Comaptibility Directive 89/336/EEC and the Low Voltage Directive 73/23/ECC. A detailed declaration of conformity for this product can be found at: http://www.eicon.com/worldwide/about/declarations/default.htm

CS: Eicon Networks tímto prohlašuje, že tento ITE je ve shodě se základními požadavky a dalšími příslusnými ustanoveními směrnice 1999/5/ES.

DA: Undertegnede Eicon Networks erklærer herved, at følgende udstyr ITE overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

DE: Hiermit erklärt Eicon Networks, dass sich das Gerät ITE in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen relevanten Bestimmungen der Richtlinie 1999/5/EG befindet.

EL: ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Eicon Networks ΔΗΛΩΝΕΙ ΟΤΙ *ITE* ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

EN: Hereby, Eicon Networks, declares that this ITE is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

ES: Por medio de la presente Eicon Networks declara que el ITE cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/EC.

ET: Käesolevaga kinnitab Eicon Networks seadme ITE vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

FI: Eicon Networks vakuuttaa täten että ITE tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien diretiivin muiden ehtojen mukainen.

FR: Par la présente Eicon Networks déclare que l'appareil ITE est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

HU: Alulírott, Eicon Networks nyilatkozom, hogy a ITE megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.

IC: Hér með lýsir Eicon Networks yfir því að ITE er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.

IT: Con la presente Eicon Networks dichiara che questo ITE è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

LT: Šiuo Eicon Networks deklaruoja, kad šis ITE atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

LV: Ar šo Eicon Networks deklarē, ka ITE atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

MT: Hawnhekk, Eicon Networks, jiddikjara li dan ITE jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

NL: Hierbij verklaart Eicon Networks dat het toestel ITE in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

NO: Eicon Networks erklærer herved at utstyret ITE er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

PL: Eicon Networks niniejszym oświadcza, że ITE spełnia wszystkie istotne wymagania i odpowiednie ustalenia dyrektywy 1999/5/EC.

PT: Eicon Networks declara que este ITE está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

SL: Eicon Networks izjavlja, da je ta ITE v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

SK: Eicon Networks týmto vyhlasuje, že ITE spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

SV: Härmed intygar Eicon Networks att denna ITE står l överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Detailed R&TTE Declaration

You can find the detailed declaration for your product on our web site:

http://www.eicon.com/worldwide/about/declarations/default.htm

Safety status

SELV (VDE No. 411.1.3 part 410): Diva 2.0, Diva 2.01, Diva Pro 2.0

No voltages within this equipment exceed SELV voltages. All interconnection points and ports are SELV.

The ISDN interface of this equipment is approved for connection to SELV-circuits. The equipment has to be used with inhouse cabling in combination with an approved NT-1 unit.

TNV-1: Diva USB, Diva 2.02, Diva Pro 3.0, Diva Pro 3.0 PC Card

The interfaces are approved for connection to SELV-circuits and TNV-1-circuits without power feeding according to EN 60950. This approval is void if the adapter is connected to a computer that is not compliant with EN 60950.

Sicherheitsklasse

SELV (VDE 0100 Nr. 411.1.3 Teil 410): Diva 2.0, Diva 2.01, Diva Pro 2.0
Keine Spannung auf diesen Geräten überschreitet die SELV-Spannung. Alle Verbindungspunkte und -öffnungen sind SELV.

Der ISDN-Anschluß dieser Geräte erfüllt SELV-Anforderungen und darf deshalb nur an Verkabelungen innerhalb eines Gebäudes in Kombination mit einem nach EN 60950 geprüften NTBA eingesetzt werden.

TNV-1: Diva USB, Diva 2.02, Diva Pro 3.0, Diva Pro 3.0 PC Card
Die BRI Schnittstelle ist ausgelegt, um Verbindungen zu SELV und TNV-1 Stromkreisen gemäß EN 60950 sicher zu gewährleisten. Diese Adapter sind nur für den Einbau in oder den Anschluß an nach EN 60950 geprüften Einsatzgeräten getestet.

Power consumption

Warning: Check that power supply will not be overloaded. Maximum power consumption of the board is shown in the table on page 5 and 6. The user should check that the total power drawn by the host computer, the Diva Client adapter, and any other peripherals, must not exceed the capability of the host Power Supply Unit. The Diva Client adapter does not draw power from the ISDN network.

User/Installer Instructions for the United Kingdom

Diva adapter Communications Board (internal models only)

Important safety considerations when installing into a host computer system

Warning: The ISDN cord(s) must remain disconnected from the telecommunications system until the card has been properly installed within the host which provides the necessary protection of the operator.

Proper installation of the ISDN card requires that the ISDN card is screwed to the metal backplate of the PC. This ensures proper grounding, which is necessary for your safety.

If it is subsequently desired to open the host equipment for any reason, the ISDN cord(s) must be disconnected prior to effecting access to the ISDN communications card.

Installation within a spare slot position

Warning: It is essential that, when other option cards are introduced which use or generate a hazardous voltage, the minimum creepages and clearances specified in the table below are maintained. Suitable user protection to ensure compliance with EN 60950 should be present on the card. A hazardous voltage is one which exceeds 42.4V peak a.c or 60V d.c. If you have any doubt, seek advice from a competent engineer before installing other adapters into the host equipment.

The equipment must be installed such that with the exception of the connections to the host, clearance and creepage distances shown in the table below are maintained between the card and any other assemblies which use or generate a voltage shown in the table below.

Clearance X mm	Creepage Y mm	Voltage used or generated by other parts of the host or expansion card Vrms or Vdc
2.0	2.4 (3.8)	up to 50
2.6	3.0 (4.8)	up to 125

Clearance X mm	Creepage Y mm	Voltage used or generated by other parts of the host or expansion card Vrms or Vdc
4.0	5.0 (8.0)	up to 250
4.0	6.4 (10.0)	up to 300

The larger distance shown in brackets applies where the local environment within the host is subject to conductive pollution or dry non-conductive pollution which could become conductive due to condensation. Failure to maintain these minimum distances would invalidate the approval.

These distances can be checked by measuring between the adjacent parts. X is the clearance distance which is the shortest distance in air between two points. Y is the creepage path (along surfaces) between the same two points.

Regulatory information for Australia

PCI models

- This customer equipment shall only be installed in a PC that requires the use of a tool to gain access to internal parts (e.g. this customer equipment must not be installed in a PC with a ‘flip lid’).
- Proper installation of the Diva adapter card requires that it is screwed to the metal backplate of the computer. This ensures proper grounding, which is necessary for safety purposes.
- This customer equipment may only be installed in host equipment where there is at least 2 mm of air gap between the customer equipment and adjacent boards (PCBs).
- Only compliant line cord set(s) shall be used as replacements with this customer equipment.

PC Card (PCMCIA) models

- This customer equipment may only be installed in conjunction with compliant customer equipment.
- This customer equipment must only be used with the Diva PCM S/T Inferface Cable, Part No. 300-172-02.
- Only line cord set(s) which are compliant shall be used as replacements with this customer equipment.

Diva adapter

Warning: This customer equipment is to be installed and maintained by service personnel as defined by AS/NZS 3260 Clause 1.2.14.3 Service Personnel. It may be hazardous if your computer is not properly plugged in and grounded.